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Inequalities in q -Fourier Analysis

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Abstract: In this paper we introduce the q -Bessel Fourier transform, the q -Bessel translation operator and the q -convolution product. We prove that the q -heat semigroup is contractive and we establish the q -analogue of Babenko inequalities associated to the q -Bessel Fourier transform. With applications and finally we enunciate a q -Bessel version of the central limit theorem.



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